

UNITED STATES DEPARTMENT OF AGRICULTURE  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

1. REGISTRATION NO.  
92-R-0001

CUSTOMER NO.  
1046

FORM APPROVED  
OMB NO. 0579-0036

## ANNUAL REPORT OF RESEARCH FACILITY (TYPE OR PRINT)

2. HEADQUARTERS RESEARCH FACILITY (Name and Address, as registered with USDA, include Zip Code)

OREGON HEALTH & SCIENCES UNIVERSITY  
3181 SW SAM JACKSON PARK RD., (b)(2)High, (b)(7)f  
PORTLAND, OR 97239-3098

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets if necessary.)

### FACILITY LOCATIONS/sites

(b)(2)High, (b)(7)f

### REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets if necessary or use APHIS FORM 7023A)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain- relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress in these animals and the reasons such drugs were not used must be attached to this report)	F. TOTAL NO OF ANIMALS  (Cols. C + D + E)
4. Dogs			5		5
5. Cats			6		6
6. Guinea Pigs	20		813	42	855
7. Hamsters			94		94
8. Rabbits			296		296
9. Non-Human Primates	2653	1204	1107		2311
10. Sheep			154		154
11. Pigs			262		262
12. Other Farm Animals					
13. Other Animals					

### ASSURANCE STATEMENTS

- 1) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- 2) Each principal investigator has considered alternatives to painful procedures.
- 3) This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all the exceptions is attached to this annual report. In addition to identifying the IACUC-approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- 4) The attending veterinarian for this research facility has appropriate authority to ensure the provision of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

### CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL (Chief Executive Officer or Legally Responsible Institutional official)

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143)

SIGNATURE OF C.E.O. OR INSTITUTIONAL OFFICIAL

NAME & TITLE OF C.E.O. OR INSTITUTIONAL OFFICIAL (Type or Print)

DATE SIGNED

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11/29/2007

## APHIS Form 7023 Column E Explanation

This form is intended as an aid to completing the APHIS Form 7023 Column E explanation. It is not an official form and its use is voluntary. Names, addresses, protocols, veterinary care programs, and the like, are not required as part of an explanation. A Column E explanation must be written so as to be understood by lay persons as well as scientists.

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1. Registration Number: 92-R-0001

2/3. Species (common name) & Number of animals used in this study:

Guinea Pigs (42)

4. Explain the procedure producing pain and/or distress.

Will be sent by mail

5. Provide scientific justification why pain and/or distress could not be relieved. State methods or means used to determine that pain and/or distress relief would interfere with test results. (For Federally mandated testing, see Item 6 below)

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6. What, if any, federal regulations require this procedure? Cite the agency, the code of Federal Regulations (CFR) title number and the specific section number (e.g., APHIS, 9 CFR 113.102):

Agency: Will be sent by mail

CFR:

Annual Report of Research Facility  
Reference: APHIS Form 7023

Oregon Health Sciences University

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Certificate Number: 92-R-0001

Summary of the exceptions to the AWA standards and regulations approved by the IACUC October 1, 2006 through September 30, 2007.

Nineteen protocols were approved allowing investigators to withhold food from sheep or goats for 24 hours prior to surgery. The IACUC accepted scientific justification that ruminants have fewer intra operative complications when fasted for 24 hours. 0 goats and 98 sheep were affected by this exception.

Seven protocols were approved allowing the housing of sheep for up to three weeks in stanchions that do not allow them to turn around. The sheep are allowed free access to food and water and are able to stand or lie down. The IACUC accepted scientific justification that this restraint is required to allow withdrawal and infusion of fluids through implanted catheters, continuous monitoring of coronary blood flow, and to prevent the sheep from nibbling at the catheters. 72 sheep were affected by this exception.

One protocol was approved allowing microswine to be restrained in panepinto slings for < 1 hour. The IACUC accepted justification that the pigs need to be restrained to allow for access to ear vein catheters for rapid infusion of test drugs and blood sampling in a microswine model of hypertension following intrauterine growth retardation. 11 pigs were affected by this exception.

One protocol was approved allowing the withholding of analgesics to guinea pigs undergoing ovariectomies. Children's Motrin was recommended by the DCM veterinary staff to be used as an analgesia. It was found that the guinea pigs did not tolerate the Motrin and developed intestinal problems and stomach ulcers which caused morbidity. Buprenorphine was also recommended however this is an opiate drug and since the group is looking at the dopamine signaling pathways it would interfere with their electrophysiological studies in the hypothalamus. The IACUC accepted scientific justification that the use of analgesics would interfere with the study of the development of new selective estrogen receptor modulators. The Guinea Pigs were monitored closely post operatively. They recovered quickly from the surgery and resumed normal activities (eating, drinking, ambulating and grooming) within a few hours. The protocol indicates that any guinea pigs experiencing pain (defined as abnormal behavior, anorexia, immobility, guarding of incision, lack of grooming and weight loss) would be humanely euthanized. 42 guinea pigs underwent the ovariectomy. 0 Guinea pigs displayed signs of pain postoperatively and 0 were euthanized due to unrelieved pain.

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APHIS Form 7023

Certificate Number: 92-R-001

Summary of exceptions to the AWA standards of care and regulations approved by the IACUC from October 1, 2006 through September 30, 2007.

1. The IACUC granted exceptions to the AWA NHP cage changing/washing standards for the following protocols involving animals maintained on catheter protection systems.

Cage changes are very stressful for the animals on these protocols. In order to protect the animals and the indwelling catheters, cages are cleaned on a weekly basis when the animals are anesthetized with ketamine to have their catheters checked. During this time, the cages are washed down with an antiseptic detergent solution and then rinsed. This supplements the standard daily washing the cages receive. It was approved that the cages could be maintained in this manner rather than the standard, every two-week cage change. This exception applied to 16 animals.

2. The IACUC granted exceptions to the AWA NPH cage size standards for the following protocols:

A cage size exception (prior to 02/20/07) for monkeys on a protocol which requires a catheter protection system was approved. A cage larger than the recommended size would not provide a larger range of movement because the protective vest is tied to the cage sides so the monkey cannot turn around and damage the catheters and electrodes. No animals were affected by this exception during the reporting period.

A cage size exception for a monkey currently in a grooming contact pair and weighs 10.4 kg. This animal has been successfully paired for over 6 months. This monkey had lived for a long time in a group and had been showing signs of distress prior to being pair-housed. Since being paired, his stress level has decreased and shows an increase in species typical behaviors. Stress can alter multiple physiological and immunological parameters in NHPs. Separating this pair would affect the results of this study. This animal is currently on a weight loss program. If the weight cannot be reduced, the approval will be reconsidered. Note: As of 03/12/2007 the monkey was back under 10 kg. The recommended housing for the animals is the group 4 category, but the exception allows for the animal to be housed in the group 3 category.

A cage size exception was given for 2 animals which have been successfully pair-housed for an extended period of time. The animals are now over 10kg. They are part of a long-term longitudinal study where any disturbance to group dynamics could induce significant stress. The Behavioral Sciences Unit has shown that animals separated from successful partners have higher cortisol levels than animals living in pairs, even months after the separation. Stress and alterations in the HPA axis can alter multiple physiological and immunological parameters in NHPs which would seriously impact the study. The recommended housing for this animal is the group 4 category, but the exception allows for the animal to be housed in the group 3 category.

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3. The IACUC granted exceptions to the AWA NPH housing standards for the following protocols:

A study animal in a vest and tether system requires temporary shielding from another animal that has been deemed threatening and stressful to her. Temporary shielding (with a movable partition or screen) will sometimes be required for a variable period of time (up to 7-14 days) until the animal adapts. At all times the shielded animal has the opportunity to view a TV screen. This exception has not had to be used in the reporting time period.

Small monkeys (infants, less than 2 kg) in the nursery are requested to be housed in a clear polycarbonate-front group cage for the purpose of forming new groups. The period is generally 10-14 days. The total square footage is not as much as the cage size requirement but they are taller and the monkeys use all of the space thus improving opportunities for exercise and socialization. 18 square feet for a play cage is recommended for a play pen for animals of this size, but the exception allowed a cage space of 14.5 square feet to be used. The exception applied to 140 animals.

An exception for monkeys in a specific group housing run from being placed across from conspecifics due to the design of the run. Animals are usually caged in pairs but occasionally one may be removed, leaving the cage mate temporarily unable to see conspecifics. This exception applies to 125 animals.

4. The IACUC granted exceptions to the AWA NPH standards regarding feeding and watering for the following protocols:

An exception excluding the feeding of fruits and vegetables to a group of animals on a fetal nicotine exposure protocol was approved. The food exception is required because the animal's vitamin C intake must only come from chewable tablets. The Psychological well-being staff will replace vitamin C containing food enrichment with other enrichment foods. The exception applied to 7 animals.

An exception of the animals' standard morning and evening feedings for a cognitive testing protocol was approved. The animal's morning chow may be given later in the day after cognitive testing, at which time they receive food rewards. If the animals are not motivated at that time, they may be retested later in the day. Occasionally an animal may receive meals 20 hours apart. The exception applied to 2 animals.

An exception of a 20% food restriction for a protocol determining the mechanisms by which common life stresses, i.e. dieting, moderate exercise (treadmill), and psychological stress (which includes free play, remote controlled car, stranger approach, novel food) impair activity of the reproductive axis and fertility. The animals are weighed once a week and the diets are adjusted so they are all fed a maintenance diet. The exception applied to 11 animals.

An exception was approved for once a day feedings of animals on alcohol consumption protocols. The animals are weighed once a week and the diets are adjusted so they are all fed a maintenance diet. Once the animals are trained to consume alcohol for reservoirs mounted on a panel, their diets will return to the standard twice a day feeding regimen. All animals in the study will receive a ration of fruit in the evenings. The exception applied to 17 animals.

5. The IACUC granted an exception for major multiple survival surgeries involving up to four survival hysterotomies on up to one hundred female *Macacca mulatta*.

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The IACUC granted and the USDA approved the Time Mated Breeding program an exception to the AWA standards for allowed number of research directed major, multiple survival surgeries for adult female rhesus macaques. Availability of rhesus macaques that cycle well and provide consistent pregnancies is extremely limited at NIH supported research facilities. Allowance for the increase to a total of 4 major survival surgeries (hysterotomies) on up to 2 different projects will expand the capability of reproductive studies and refine the efficient use of this limited nonhuman primate resource. Within the reporting period, 5 animals were tangential to the exception.

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